

**WHAT IS CLAIMED IS:**

- 1                   1.     A photocurable silver composition consisting essentially of:  
2                         a photocurable organic mixture;  
3                         a photoinitiator;  
4                         silver powder; and  
5                         silver flakes in an amount of at least 20% relative to the weight  
6     of the silver powder, the photocurable silver composition when illuminated with  
7     ultraviolet (UV) light cures into a silver coating.
  
- 1                   2.     The photocurable silver composition of claim 1 wherein the  
2     photocurable organic mixture comprises an aliphatic acrylated urethane oligomer.
  
- 1                   3.     The silver composition recited in claim 2, wherein the aliphatic  
2     acrylated urethane oligomer is present in an amount of about 3% to 8% of the silver  
3     composition.
  
- 1                   4.     The silver composition recited in claim 2, wherein the aliphatic  
2     acrylated urethane oligomer is present in an amount of about 8% of the silver  
3     composition.
  
- 1                   5.     The photocurable silver composition of claim 2 wherein the  
2     photocurable organic mixture further comprises an acrylated epoxy oligomer.
  
- 1                   6.     The silver composition recited in claim 5, wherein the  
2     acrylated epoxy oligomer is present in an amount of about 2% to 4% of the silver  
3     composition.
  
- 1                   7.     The silver composition recited in claim 5, wherein the  
2     acrylated epoxy oligomer is present in an amount of about 3% of the silver  
3     composition.

1                   8.     The photocurable silver composition of claim 5 wherein the  
2 photocurable organic mixture further comprises an isobornyl acrylate monomer.

1                   9.     The silver composition recited in claim 8, wherein the  
2 isobornyl acrylate monomer is present in an amount of about 4% to 8% of the silver  
3 composition.

1                   10.    The silver composition recited in claim 8, wherein the  
2 isobornyl acrylate monomer is present in an amount of about 5% of the silver  
3 composition.

1                   11.    The silver composition recited in claim 8, wherein the  
2 photocurable organic mixture further comprises a flow promoting agent.

1                   12.    The silver composition recited in claim 11, wherein the flow  
2 agent is present in an amount of about 0.1% to 2% of the silver composition.

1                   13.    The silver composition recited in claim 11, wherein the flow  
2 agent is present in an amount of about 1% of the silver composition.

1                   14.    The silver composition recited in claim 1, wherein the silver  
2 powder is present in an amount of about 50% to 60% of the silver composition.

1                   15.    A silver composition as recited in claim 1, wherein the silver  
2 powder is present in an amount of about 52% of the silver composition.

1                   16.    The silver composition recited in claim 1, wherein the silver  
2 flakes are present in an amount of about 25% to 35% of the silver composition.

1                   17.    The silver composition recited in claim 1, wherein the silver  
2 flakes is present in an amount of about 5% of the silver composition.

1                   18. The silver composition recited in claim 1, wherein the  
2 photoinitiator is present in an amount of about 3% to 6% of the silver composition.

1                   19. The silver composition recited in claim 1, wherein the  
2 photoinitiator is present in an amount of about 5% of the silver composition.

1                   20. A method for depositing a silver coating on a substrate, the  
2 method comprising:

3                   a first step of applying to the substrate a composition comprising:  
4                   an aliphatic acrylated urethane oligomer;  
5                   an acrylated epoxy oligomer;  
6                   an isobornyl acrylate monomer;  
7                   a photoinitiator;  
8                   silver powder; and  
9                   silver flakes in an amount of at least 20% relative to the  
10                  weight of the silver powder; and  
11                  a second step of photocuring by exposure to light of a wavelength  
12                  effective to cure said composition.

1                   21. A method as recited in claim 20, wherein the first step  
2 comprises spraying the silver-containing fluid-phase composition onto the substrate.

1                   22. A method as recited in claim 20, wherein the first step  
2 comprises applying the silver-containing fluid-phase composition to the substrate  
3 using a screen printing technique.

1                   23. A method as recited in claim 20, wherein the first step  
2 comprises applying the silver-containing fluid-phase composition to the substrate  
3 using a flexographic technique.